A. KLINE.

Stopper for Jars.

No. 40,415. Patented Oct. 27, 1863.

Fig. 1.

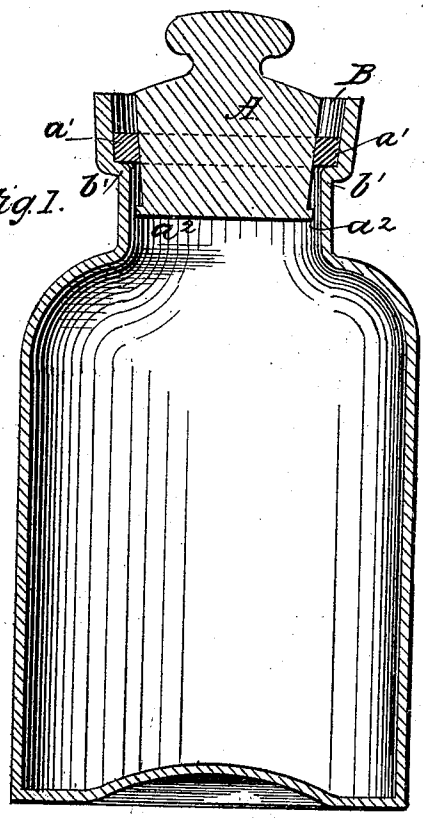
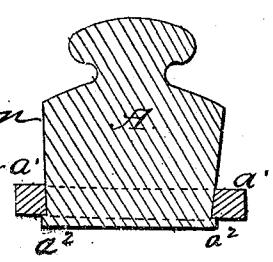


Fig. 2



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UNITED STATES PATENT OFFICE.

A. KLINE, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVED STOPPER FOR JARS AND BOTTLES.

Specification forming part of Letters Patent No. **40,415**, dated October 27, 1863.

To all whom it may concern:

Be it known that I, A. KLINE, of the city of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Stopples for Fruit Jars and Bottles; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a central vertical section of a fruit-jar and the improved stopple applied thereto, and Fig. 2 a like section of the stopple detached, like letters indicating the same parts when in both figures.

The nature of my invention consists, substantially as hereinafter described and specified, in the construction and combined arrangement of a tapering central portion or core, of glass or other material, impermeable to air, and an elastic band or ring, of prepared caoutchouc or its equivalent, surrounding the same in such a manner that, as the central portion or core is forced downward within the mouth of the jar or bottle, the outer edge of the band or ring will be arrested either by the usual shoulder or the sloping sides of the former, while the tapering central portion or core advances and compresses the band or ring between it and the said sides of the mouth of the jar or bottle, and thus effectually closes the mouth of the same.

In the drawings, A is the tapering central portion or core; a', the band or ring, and B the mouth of the fruit-vessel.

The core A is made substantially in the form of the usual glass stopple of a salt-mouthed bottle, with the addition of a narrow flange, a^2, around the lower end of the same, substantially as represented in the drawings. It may be made hollow, if lightness or economy require it to be so made.

The band or ring a' consists of prepared caoutchouc, and should be of a rectangular solid form in its transverse section, and with an inner diameter equal to the smallest diameter of the tapering portion of the core A. The width and depth, respectively, of the body of the ring should be about a quarter of an inch, more or less. The object of the flange a^2 being merely for the purpose of keeping the band or ring a' from slipping entirely off of the core A in withdrawing the stopple from the mouth of the vessel, it need not exceed a sixteenth of an inch square in its transverse section, as represented in the drawings.

Operation: The band or ring a' having been sprung over the flange a^2, and fitting loosely around the smallest portion of the tapering part of the core A, as seen in Fig. 2, the operator introduces the stopple into the mouth of the vessel to be closed, the said mouth being in size at its upper end to just receive the stopple easily, and by his thumb and fingers forces the said stopple downward by a rotary motion, when the greater amount of friction which occurs at the outer edge of the ring a' soon arrests the motion of the same, while the core A, advancing farther through the ring, compresses the latter like a wedge, and thus produces perfectly air-tight joints between the vessel and the core A. If the vessel has an inner shoulder, b', (see Fig. 1,) a smaller stopple can be used, because the said shoulder will suddenly arrest the downward motion of the ring a', irrespective of the tapering sides of the mouth of the vessel, and hold it firmly while the core A is being forced into it.

It will be evident that this stopple is an exceedingly simple, cheap, easily-applied, and effective one for closing fruit jars and bottles so as to preclude the after entrance of air, and also that it affords more convenient access than others for the usual temporary introduction of a dress-pin between the core A and the ring a', to allow the escape of the air displaced by forcing down the core, and its admission in withdrawing the same, thus facilitating the operation of closing and opening the vessel.

Having thus fully described my improved stopple and pointed out its utility, what I claim as new, and desire to secure by Letters Patent, is—

A stopple for fruit jars and bottles, consisting of the core A and the ring a', constructed and arranged together in combination, substantially as described and set forth.

A. KLINE.

Witnesses:
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